

1 CLAIMS

2 What is claimed is:

3
4 Claims

- 5
- 6 1. Partially rigid and partially collapsible foldable sheet material having a
7 longitudinal direction and a transverse direction generally perpendicular to the
8 longitudinal direction comprising:
- 9 a. alternating longitudinal rigid strips that are rigid in the transverse direction
10 and longitudinal collapsible strips that are collapsible in the transverse
11 direction;
- 12 b. the longitudinal rigid strips are formed of generally parallelogram shaped
13 portions, each generally parallelogram shaped portion of the same rigid
14 section being generally the same dimension in the transverse direction; and
15 c. longitudinal collapsible sections are formed of at least one quadrilateral-
16 shaped portion and formed such that any longitudinal collapsible section is
17 the mirror image of its nearest longitudinal collapsible section
18
- 19 2. Partially rigid and partially collapsible foldable sheet material as claimed in
20 claim 1 wherein the longitudinal collapsible sections are formed of quadrilateral
21 portions.
22
- 23 3. Partially rigid and partially collapsible foldable sheet material of claim 1
24 further comprising:
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1 a lamination portion adhered to a top side or a bottom side or both top
2 and bottom side of the collapsible structure.

3
4 4. Partially rigid and partially collapsible foldable sheet material of claim 1
5 wherein the collapsible sections are retained in the collapsed structure by
6 adhering one surface portion to another surface portion.

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9 5. A partially collapsible structure made from foldable sheet material
10 comprising:
11 a. longitudinal collapsible sections separated by longitudinal rigid sections;
12 b. the longitudinal rigid sections are formed by a series of rectangular
13 portions having substantially uniform transverse dimensions within each
14 section;
15 c. the longitudinal collapsible sections are formed by a series of geometric-
16 shaped portions, at least one of which is a quadrilateral; and
17 d. adjacent longitudinal rigid sections and longitudinal collapsible sections
18 meet at an edge such that when the collapsible section is collapsed and
19 forms two opposite surfaces, one entire edge is not covered when viewed
20 from one surface.

21
22 6. A partially collapsible structure made from foldable sheet material as claimed
23 in claim 5 wherein the longitudinal collapsible sections are formed of
24 quadrilateral portions.
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1 7. A partially collapsible structure made from foldable sheet material as claimed
2 in claim 6 wherein one or more of the quadrilateral portions include folds that
3 define triangular areas.

4
5 8. A partially collapsible structure made from foldable sheet material as claimed
6 in claim 5 wherein one or more of the quadrilateral portions include triangular
7 areas.

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9 9. A partially collapsible structure made from foldable sheet material as claimed
10 in claim 5 further comprising:
11 a lamination portion adhered to a top side or a bottom side or both top
12 and bottom side of the collapsible structure.

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14 10. A partially collapsible structure made from foldable sheet material as claimed
15 in claim 5 wherein the collapsible sections are retained in the collapsed
16 structure by adhering one surface portion to another surface portion.

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18 11. A partially collapsible structure made from foldable sheet material
19 comprising:
20 a. a series of longitudinal folds and transverse folds defining alternate
21 longitudinal rigid strips and longitudinal collapsible strips;
22 b. each longitudinal rigid strip comprising a series of generally rectangular
23 portions joined in the longitudinal direction and substantially equidistant in
24 the transverse direction;
25

- 1 c. each longitudinal collapsible strip comprising a generally quadrilateral-
2 shaped portion such that all quadrilateral shaped portions within each
3 longitudinal collapsible section are not comprised of a series of 3 right
4 isosceles triangular shaped areas.

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6 12. A partially collapsible structure of claim 11 further comprising:

7 a lamination portion adhered to a top side or a bottom side or both top
8 and bottom side of the collapsible structure.

9
10 13. A partially collapsible structure of claim 11 wherein the collapsible sections
11 are retained in the collapsed structure by adhering one surface portion to
12 another surface portion.

13
14 14. Partially rigid and partially collapsible foldable sheet material having a
15 longitudinal direction and a transverse direction generally perpendicular to the
16 longitudinal direction comprising:

- 17 a. At least one longitudinal rigid strip that is partially rigid and partially
18 collapsible in the transverse direction and at least one alternating longitudinal
19 collapsible strip that is collapsible in the transverse direction;
20 b. the longitudinal rigid strip is formed of generally quadrilateral portions,
21 each generally quadrilateral portion of the same rigid strip being generally
22 the same dimension in the transverse direction;
23 c. the longitudinal collapsible strip is formed of at least one quadrilateral-
24 shaped portion.
- 25

1 15. Partially rigid and partially collapsible foldable sheet material of claim 14

2 comprising:

3 two or more rigid strips separated by a collapsible strip.

5 16. Partially rigid and partially collapsible foldable sheet material of claim 14

6 comprising:

7 two or more collapsible strips separated by a rigid strip.

9 17. Partially rigid and partially collapsible foldable sheet material of claim 15

10 wherein any longitudinal collapsible section is the mirror image of its nearest
11 longitudinal collapsible section.

13 18. Partially rigid and partially collapsible foldable sheet material of claim 14

14 further comprising:

15 a lamination portion adhered to a top side or a bottom side or both top
16 and bottom side of the collapsible structure.

18 19. Partially rigid and partially collapsible foldable sheet material of claim 14

19 wherein the collapsible sections are retained in the collapsed structure by
20 adhering one surface portion to another surface portion.